

**AMENDMENTS TO THE CLAIMS**

Claims 1-28 (cancelled)

29. (New) An array of arrays comprising:

- (a) a first substrate with a surface comprising a plurality of assay wells; and
- (b) a second substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured to fit within said assay wells.

30. (New) The array of arrays according to claim 29, further comprising a hybridization chamber configured so as to receive said second substrate.

31. (New) The array of arrays according to claim 29, wherein said assay wells comprise wells of a microtiter plate.

32. (New) The array of arrays according to claim 31, comprising 96 wells.

33. (New) The array of arrays according to claim 31, comprising 384 wells.

34. (New) The array of arrays according to claim 31, comprising 1536 wells.

35. (New) The array of arrays according to claim 29, wherein said bioactive agents are selected from the group consisting of nucleic acids, nucleic acid analogs, peptides, peptide structural analogs, saccharides, fatty acids, steroids, purines, and pyrimidines.

36. (New) The array of arrays according to claim 29, wherein said array locations comprise from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

37. (New) The array of arrays according to claim 29, wherein said array locations comprise from 100,000 to about 10,000,000 bioactive agents per square centimeter.
38. (New) The array of arrays according to claim 29, wherein said array locations comprise from 10,000 to about 100,000 bioactive agents per square centimeter.
39. (New) The array of arrays according to claim 29, wherein said bioactive agents are directly coupled to said array locations.
40. (New) The array of arrays according to claim 29, wherein said bioactive agents are attached to microspheres and wherein said microspheres are associated with said array locations.
41. (New) An array of arrays comprising a substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured to fit within a plurality of wells of a microtiter plate.
42. (New) The array of arrays according to claim 41, comprising 96 wells.
43. (New) The array of arrays according to claim 41, comprising 384 wells.
44. (New) The array of arrays according to claim 41, comprising 1536 wells.
45. (New) The array of arrays according to claim 41, wherein said bioactive agents are selected from the group consisting of nucleic acids, nucleic acid analogs, peptides, peptide structural analogs, saccharides, fatty acids, steroids, purines, and pyrimidines.
46. (New) The array of arrays according to claim 41, wherein said array locations comprise from 10,000,000 to 2,000,000,000 bioactive agents per square centimeter.

47. (New) The array of arrays according to claim 41, wherein said array locations comprise from 100,000 to about 10,000,000 bioactive agents per square centimeter.

48. (New) The array of arrays according to claim 41, wherein said array locations comprise from 10,000 to about 100,000 bioactive agents per square centimeter.

49. (New) The array of arrays according to claim 41, wherein said bioactive agents are directly coupled to said array locations.

50. (New) The array of arrays according to claim 41, wherein said bioactive agents are attached to microspheres and wherein said microspheres are associated with said array locations.